SPONTANEOUS COMMUNICATION NETWORKS

ABSTRACT OF THE DISCLOSURE

5   A spontaneous data communication network includes antenna/transceiver sets located in mobile (e.g., vehicles such as cars, buses, trucks, ferries, etc.) or stationary units (e.g., computers, manufacturing equipment, office furniture, office equipment, road signs, overpasses, bridges, etc.). Each antenna/transceiver set directs network traffic based on optimizing a merit function or penalty function to

10   reduce costs of congestion for stochastically changing demands and flows in a data communication system. The routers exchange values with neighboring routers. Based on the exchanged values and values local to a router, flow conditions are checked and if necessary the local values are adjusted until the flow conditions are satisfied or a time period expires. Adjustments are associated with

15   optimizing a merit function or penalty function. Based on the adjusted values, the router adjusts parameters to be used to direct packets of the network traffic flows to other routers or other destinations within the data communication system. An aggregation scheme is used for reducing the number of values stored in a single router module.

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